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N. GOODSELL, EDITOR.

FLAX AND HEMP.

As the growth and manufacture of Flax and Hemp are of great national importance, we regret that any political bickerings should prevent our Legislators from giving to this branch of agriculture and domestic manufacture that encouragement which their importance demand. Was our Government to form a Linen and Hempen Board, and place funds at their disposal, for the encouragement of the growth and manufacture of these articles, we think it would accelerate our national prosperity.

Of so much importance has England considered the growth and manufacture of flax and hemp, that she has placed in the hands of the Linen Board of Ireland about one hundred thousand dollars annually, to be distributed in the form of premiums, for encouraging improvements in the growth and manufacture of these articles.

Notwithstanding the attention paid to this subject in Ireland, previous to 1822 there was an acknowledged superiority in favor of the Dutch, in producing not only a finer manufactured article, but the flax in its merchantable shape. Under a proper conviction of this difference, the Linen Board of Ireland commissioned Peter Besnard, Esq. Inspector-General of Leinster, Munster and Connaught, to proceed to the Netherlands and make such examinations of the manner of treating "Flax and Hemp, as well in the tillage and preparation of the soil, as in the after management and regulations of the market until bought for exportation."

This gentleman, from his long acquaintance with the subject, was well prepared for the appointment conferred upon him by the Board, and which he executed to their entire satisfaction.

During the subsequent year the Editor of this paper was in Ireland, and had an introduction to James Corry, Esq. Secretary to the Board, and also to Mr. Besnard; both of these gentlemen were extremely polite to us, and gave us the liberty of perusing such papers respecting the linen and hempen business, belonging to the society, as we deemed of importance, and also in answering such inquiries as we thought proper to make of them personally. They also presented us with several printed pamphlets and circulars relative to the above business, which we forwarded to the United States,—the substance of which was embodied in the Message of the President, of the 5th of January, 1825, transmitting a report from the Secretary of the Navy, in relation to American canvass, cables and cordage, and which has since been reprinted in compliance with a resolution introduced into the House by Mr. Spencer of New York, April 22d, 1830.

As many of our readers may not have had the opportunity of perusing the publications alluded to, we will select such parts of them as we think will be most beneficial to them and the public generally, for this and subsequent numbers of the Genesee Farmer.

It will be perceived by these documents, when they shall appear, that two points are clearly established, viz: 1st—That flax which is allowed to ripen the seed, is capable of being manufactured into the finest fabrics without any diminution of quality in comparison with that pulled when in blossom, but an increase in quantity. 2d—That water rotting of flax not only increases the quality but the quantity, in a sufficient ratio to meet any extra expenses which may accrue in this over the common method of dew rotting.—And 3d—That the present differences in the prices of the two articles, (dew rotted and water rotted) bear no proportion to their real value for the purposes of manufacturing.

With regard to the growth of flax in the United States, we have to observe that we have seen what we considered a finer growth than we ever saw in Ireland, but would not be understood that we think the average produce better. We know that there is a great difference in different parts of the United States, as regards this crop,—those parts which are most subject to droughts do not produce as fine as those in which the atmosphere is more damp. On this principle Ireland is better adapted to the growth of flax than the U. States generally, and yet the average price of flax in America, will be found to be less than in Ireland. The difference would be sufficient to warrant the exportation from this country to that, if the quality would answer,—but it will not.

During our stay in England, a friend of ours tried the experiment by importing into England from the United States, several tons of our dew rotted flax, which would have allowed him a handsome profit as the prices were, but it was found unfit for the manufacturer, and the trade abandoned.

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To the Senate of the United States:

In compliance with a resolution of the Senate, of the 17th May last, I transmit a report from the Secretary of the Navy, which contains the information requested.

JAMES MONROE.

Washington, 5th Jan. 1831.

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NAVY DEPARTMENT, Jan. 5, 1825.

SIR—In answer to the resolution of the Senate of the United States, of the 17th May last, "That the President of the United States be requested to cause a report from the Secretary of the Navy to be laid before the Senate, at the commencement of the next session of Congress, showing the reason, if any, why canvass, cables, and cordage, made of hemp, the growth of the United States, may not be used in the equipment of national vessels, with equal advantage as if of foreign fabric and materials," I have the honor to present to you the following report:

The resolution was communicated to the Board of Navy Commissioners, who have furnished the answer, marked A.

A variety of questions were proposed to growers and manufacturers of hemp, and answers received, from which the extracts, marked No. 1 to 5, are taken.

From these and other sources of information, the following conclusions are drawn.

1st. That hemp may be cultivated in the United States to any extent which our necessities may require.

2d. That, in the present mode of cultivation, there are some errors which may readily be corrected when more attention is paid to it.

3d. That, in its natural state, it is, in all important qualities, equal to that which we are in the habit of importing.

4th. That it is injured in the mode of rotting and preparing it for manufacture.

5th. That if sown thicker on the ground, water-rotted, and prepared with care, it will be, for all purposes, equal to any other.

6th. That canvass, cables, and cordage, manufactured out of it, as now cultivated, are inferior in color, strength and durability, to those manufactured from imported hemp, and consequently are not as *safe* or proper for use in the navy. And that this is the reason, and the only reason, "why canvass, cables, and cordage, made of hemp, the growth of the United States, may not be used in the equipment of national vessels, with equal advantage as if of foreign fabric or materials."

I have the honor to be, with sentiments of high respect, Sir, your obedient servant,

SAM'L. L. SOUTHARD.

President U. States.

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NAVY COMMISSIONER'S OFFICE,
17th November, 1824.

SIR—The Commissioners of the Navy have received a copy of a resolution of the honorable the Senate of the United States, of 17th May last, calling for a report "at the commencement of the next session of Congress, showing the reason, if any, why canvass, cables, and cordage, made of hemp, the growth of the United States, may not be used in the equipment of national vessels with equal advantage as if of foreign fabric or materials."

Early after the passage of this resolution, the Commissioners opened an extensive correspondence with persons engaged in the manufacture of canvass and cordage, and they have consulted all the authorities within their reach, with a view to gain such information upon the interesting question embraced by the resolution, as would assist in forming satisfactory conclusions; and they now respectfully submit the following report:

The Commissioners beg leave to premise, that the canvass manufactured in the United States, is made generally of *flax*. They believe that hemp has not been used for that purpose in any of the large factories: though it has been suggested, that, if hemp were sowed unusually thick, and pulled at a period to produce a fibre or hurl, on a medium between the ordinary hemp and flax, that is stouter and stronger than the latter, yet not so coarse and rough as the former, it might be found to be an advantageous substitute in the manufacture of canvass.

With regard to flax in the manufacture of canvass, there can be no doubt that the American plant, if water rotted and properly dressed, will make a cloth which may be used in the equipment of our national vessels, with equal advantage as if of foreign materials. We have purchased a consid-

erable quantity of canvass made in the United States, of flax grown at Fairfield, Connecticut, where they are "in the habit of water-rotting it;" and its quality is not only considered sufficiently good for the service, but equal to that of the best imported canvass. We have also purchased canvass made from foreign and dew-rotted, American flax mixed, and it has passed inspection, though not equal to that made from the Fairfield flax.

The manufacturers of canvass object to dew rotted flax on various grounds. They prefer Dutch at 15 or Irish at 14 cents per lb. to this kind of flax at 9 cents per pound: because, while one hundred pounds of Dutch will yield 72 lbs., and 100 lbs. of Irish will yield 65 lbs. the like quantity of American dew-rotted, will yield only 40 pounds of clean flax. No reason can be discerned why the American flax should yield so much less than the Dutch, unless it is to be found in the defective process of rotting, dressing, and preparing it for market.—The American plant, in its natural state, contains, it is believed, as great a portion of fibre or lint as either of the others. A respectable manufacturer has stated, that he has long used the Fairfield flax, and that he considers it "more flexible, less woody, and stronger than that grown at the South, and preferable to Russia flax."

Others, and apparently well founded objections, are urged by the manufacturers of canvass against common American flax.—They say that in bleaching, the Irish flax has an advantage over every other description; that the coloring matter is extracted from it with less trouble and expense than the Dutch: that the American flax requires at least two-thirds more expense and twice the trouble of any other flax. The reason assigned for this by the American manufacturers is, that the American flax is not pulled until the seed are ripe; whereas, in Ireland, it is pulled green; but, in opposition to this conclusion, it is said that, "in the Netherlands, where flax is supposed to be the best prepared, generally speaking, of any in Europe, and in France, flax is always allowed to arrive at maturity, and is never pulled, particularly in Holland and Zealand, until the seed are perfectly formed, and the capsule brown and hard, so as to be easily disengaged from the stock;" and if, as it is alleged, Irsih flax is found to be more easily bleached than the Dutch, this advantage appears to be more than counterbalanced by the fact, that 100 lbs of the latter will yield 7 lbs. more of clean flax than an equal quantity of the former.

The practice of pulling the plant in a green state, is defended on the grounds that, the younger the plant, the finer the tissue; yet, it is stated as an unquestionable fact, that the flax intended for the *finest purposes*, is not pulled in the Netherlands, until the seed are ripe. An intelligent French gentleman, in a letter to Mr. Besnard, (an extract of which will be found among the papers accompanying this report) assigns reasons, which appear conclusive in favor of the practice which prevails in Holland, both as to the period when flax is pulled, and their peculiar method of steeping it.

The "high price of American flax, its unequal quality, and the uncertainty of supply," are urged as among the reasons which have induced some of the manufacturers of canvass, after repeated trials, to re-commence the importation of Irish flax; while others observe, that they have imported none since the Fall of 1821, being able to obtain a sufficient supply of American flax.

It appears to be the universal opinion of experienced men, that the process of dew-rotting flax diminishes its value and its weight, injures its color, and impairs its quality and strength. The experiments stated in the paper C. annexed, tend to confirm this opinion.

With regard to "cables and cordage, made of hemp, the growth of the United S." many of the observations previously made, with respect to flax, are, in a great degree, applicable to hemp. In its natural state American is believed to be equal to the best Russia; but the almost universal custom of dew-rotting it, is so deleterious in its effects upon the fibre, as to present insuperable objections to its use in the Navy. This process not only weakens the fibre, but prevents the tar from incorporating with the yarns, thus rendering it seriously objectionable, particularly for cables. The manufacturers of cordage further object to it, because "its staple is rough, and occupies more time in the manufacture;" and "generally comes to market in a slovenly manner, with various qualities mixed together, and badly cleaned." They say that cordage made of Russia hemp is preferred by the consumer, at an advance of 50 to 100 per cent; that dew-rotted cordage, "by exposure to the atmosphere, becomes rotten, and after being used a short time, cannot be depended on." A gentleman of experience says, "before the late war we used some cordage made from Kentucky yarns—many persons did it for the purpose of encouraging American productions; some of them had strong rejudices in its favor; but, after a fair trial, those persons confessed to me that they must give up the use of it; that it would not wear well, and they could not depend on it." The same gentleman further observes, "I would not use cordage made of Kentucky yarns or hemp, even if I could procure it at half the price of cordage made from Russia."

Manufacturers and consumers of cordage appear universally to concur in these opinions. Equally decided is their opinion as to the quality of the American plant in its natural state. They all say, that American hemp, pulled in the right season, water-rotted, and properly handled, would make as good cordage as the best Russia. Indeed, it has been forcibly contended that it would be preferable, because Russia hemp is injured from being heated on ship board—an injury to which American hemp, used in the United States, would not be liable.

While these opinions appear well founded, there is another consideration, which addresses itself immediately and forcibly to the growers of hemp in the United States. The difference between the *product* of given portions of plant, water-rotted, and dew-rotted, is confidendly believed to be greatly in favor of the former mode.

Experiments have been made by boiling and steaming, to avoid either proceess of rotting; but the result proved unsatisfactory.

Pushing their experiments with a perseverance which deserves, and must ultimately secure success, our countrymen have lately introduced a machine, called "the flax and hemp dresser," with a view to avoid altogether the process of rotting. The power of this machine, to disengage effectually the woody part of the plant from the lint, is spoken of confidently by those who have seen it in operation: but, whether the hemp thus prepared, will be as serviceable as the water-rotted; whether it will not be more liable, in bulk, to injury, from the gum and mucilage which are wholly left in it; or whether other objections may not exist, are points upon which the Commissioners are uninformed. They have, however, engaged a small supply of yarns from hemp thus prepared, and intend making experiments to test their strength and durability.

About twelve months since, a gentleman produced a sample of cordage, made, it is believed, of American dew-rotted hemp with the yarns dipped in pyroligneous acid, and tarred about one-eighth as much as yarns usually are, prior to being laid; calculating, that the antiseptic properties of this acid would obviate the injuries sustained in the process of dew-rotting, and impart to the cordage a durability equal to that made of water-rotted hemp. With a view to an experiment, the Commissioners have engaged enough of these yarns to make a nine-inch cable. Although the gentleman speaks very confidently as to the durability of cordage made from these yarns, yet we are unable to discern how the pyroligneous acid can remedy the defects occasioned by dew-rotting, and impart to the cordage the property of retaining a sufficient portion of tar for its preservation, particularly when used as cables.

The proceedings of Congress, during the last session, and the opinions then expressed, that American hemp, in its natural state, is equal to Rnssia, and that the preference given to the latter has arisen essentially from the manner in which it is rotted, have induced some of our most respectable farmers to engage in the cultivation and preparation of hemp, upon the Russian system. The Commissioners have contracted for three tons of American hemp of this description, and directed it to be made into cordage of various kinds, in order to test its comparative strength and durability with the best Russia, on board the ship the North Carolina. The result of this experiment, if the American hemp shall have been carefully gathered, at the right season, and properly prepared, will enable the Commissioners to express a satisfactory opinion upon the subject; and they cannot entertain a doubt, that, in such case, it will be in their power to say, that the American water-rotted hemp is, in all respects, full equal to the best Russia.

With regard to "the places where, and the extent to which hemp may be cultivated," in the United States, it may be unreservedly said, that the climate, throughout the whole country, is no where unfriendly, and that hemp may be cultivated advantageously wherever the soil is adapted to it.—It is grown in great perfection in the Eastern, Western, and Southern States, as far South as, and including Virginia. We have not heard of any grown South of Virginia; though, as it is known to succeed well in warm latitudes, there is no doubt it can be cultivated in our most Southern States.

The papers herewith, A, B, C, and D, will, it is hoped, afford satisfactory information upon the "manner of raising hemp, and preparing it for market," and upon the oth-

er points to which you have been pleased to call the attention of the Board.

Having given to this important subject that attention to which its intrinsic merits entitle it, and which a strong solicitude to contribute to the improvement of every source of national independence could not fail to excite, the Commissioners, with great deference submit the result.

I have the honor to be, with great respect, Sir, your most ob't servant,

JOHN RODGERS.

Hon. S. L. SOUTHARD, *Sec'y of the Navy.*

[Documents to be continued.]

INSECTS ON HOUSE PLANTS.

It often happens at this season of the year, that plants which have been kept in pots in the house, become infested with small insects of different kinds, some of which are very troublesome and often destroy the plants, unless pains are taken to destroy them. For this purpose different processes are resorted to, such as washing the plants with soap suds, decoctions of different kinds, &c. One of the most effectual remedies is to fumigate them with tobacco smoke. When green houses become infested with them, nurserymen often put a quantity of refuse tobacco into the green house and set it on fire and close the room tight, which soon becomes filled with smoke. The room is kept closed until the smoke has disappeared; when if the operation has been well conducted it is found that all the small insects upon the plants, and elsewhere in the room, are dead.

Those ladies or gentlemen who have only a few plants, and who find them infested, can place them under an inverted barrel which has but one head, or if the plants are short, a common wash tub will answer, when a small quantity of tobacco may be burned under the vessel, which will destroy any insect upon the plants Pine apples are sometimes attacked by small insects which are destroyed by raising the temperature of the room where they are kept, by the introduction of steam to that degree which will destroy the insects, and which may be done without injuring the plants. Where decoctions are used, that from tobacco will be found most effectual.

CUTTING HAY.

There is a very mistaken idea which prevails among farmers with regard to the time at which different grasses should be cut in order to afford the greatest quantity of vegetable nutritive matter; and perhaps in regard to Red top (*Agrostis vulgaris*) the mistake is as great as any. This is one of our most profitable grasses for low land meadows, but should never be sown upon upland as the roots are very troublesome in cultivated fields, being very tenacious of life, somewhat resembling the fiorin grass (*Agrostis stolonifera*) the roots of which will sprout after having been dried. The properties of the red top very much resemble those of the rough meadow grass of England, which were shown by a set of experiments, conducted by some of the most scientific men of that country, to be much increased by allowing the grass to ripen its seed instead of cutting it when in blossom. They found that the nutritive properties contained in a given quantity of grass that had ripened its seed, was, to that which was cut when in blossom, as 11 to 8, or a gain of nearly one third.

Now this is a matter of some consequence to a farmer, notwithstanding the general opinion that a load of hay is a load of hay, cut it when you will. There is a very great convenience to the farmer in having some part of his mowing ground stocked with red top, as this should not be cut until after harvest which will enable him to do his work with a less number of hands. Not only is the nutritive matter increased in a given quantity of this grass, when allowed to stand to ripen its seed, but the quantity is also very much increased on a given quantity of land, and we think it would be a fair deduction to make that the real value of one acre of this grass, cut when the seed is ripe, is equal to that from two acres cut when in flower.

HORTICULTURAL.

There was exhibited yesterday at the Arcade a basket of fine pears fully ripe. They were of the kind called *Sugar top*, were of good size, and delicious flavor.

They were from the garden of the Hon. E. B. STRONG, than whom few gentlemen have done more towards introducing foreign varieties of choice fruits. As this ripens nearly the same time with the Primitive, Little Musk and Supreme pears, and is much larger, and equally as fine in flavor, we should recommend it for cultivation in preference to either of those varieties.

There was also exhibited at the same time a fine collection of Carnations from the garden of Mr. Lancassell.

FLORAL CALENDAR.

July 22.—Balsam weed or touch-me-not (*Impatiens balsamina*) in the gardens, and water plantain, about our ponds and marshes, in flower.

The farmers are very busy about their wheat harvest and the crop is about half cut in this neighborhood. The weather thus far has been unfavorable for gathering hay and grain, having been a continuation of shine and showers.

☞ We have received a communication from a gentleman in Washington county, respecting an insect which has lately made its appearance in that and the adjoining counties, which is doing much damage to the wheat crops. We shall be happy to receive further information from that section respecting this new enemy to our industry, and due attention will be given to the subject as soon as the necessary facts can be obtained, for which we must be indebted to those who have witnessed their operation in the infested disirict.

THE SEASON.

Since the 26th of June, or in 24 days, (now July 20) rain has fallen to the depth of six inches, as may be seen by the Meteorological tables up to this date. On the 27th there fell 1 8-10 inches. July 5th, 1 8-10 do. and to day 20th, 1 5-10 inches rain.—Out of the 24 days 10 have been rainy, and but 14 fair. The Genesee is uncommonly swollen, and the falls, instead of waning till they become fordable above the sheet by every foot pad, have this season, thus far, preserved all their grandeur.

Forebodings with regard to the wheat crop have scarcely diminished up to this hour though many are harvesting; some talk of ravages by the hessian fly, others of rust, and at present all are anxiously waiting for a clear sky to secure the crop and know the worst.

The growth has been uncommonly luxuriant, and abating contingences, promised the fairest and most abundant the country ever produced. Some fields in consequence of the great rains have fallen down, and are already much injured by sprouting and will be entirely ruined unless the season becomes immediately more propitious for harvesting. As is usual at this season there is a great demand in the country for laborers, wages are high, and mechanics and builders would do well to abate a little of their fervor in this village for about two weeks, and allow some of the great class of working men to lend their aid to the neighboring farmers in securing what a kind Providence has bestowed in plenteousness.

SALT ON HAY.

Farmers should not forget that a little salt sprinkled upon their hay, as they pack it away in the stock or mow, not only enables them to put up their hay sooner with safety, but contributes to keep their stock in better health when fed with it. It also does away the necessity of salting stock during winter, which is not always convenient.

NEW VARIETY OF OATS.

The avenacea farina, or true skinless oats, is the most valuable crop perhaps ever produced in this empire. It was grown in the season of 1830, for the first time it was ever produced in Great Britain, by T. Derenzy, Esq. of Cobleman Hall, who obtained a seed through a friend of his at Rotterdam, whether it was imported from Siniang, a remote district in China; and was quite unknown to the Europeans till within these three years. The advantages which this extraordinary and valuable grain possesses over all other kinds of oats are numerous, viz. When thrashed from the sheaf it is exactly like oatmeal, and is fit for immediate use for culinary purposes, and every other for which oatmeal is consumed, the grain being quite free from any particle of rind or husk. The flavor is delicious, and it contains much more farinaceous matter. There is, of course, a considerable saving of oats, and expense of kiln-drying, grinding, sifting, &c. and one peck of it contains more nutricious food for a horse than three pecks of the common oats. The produce is most astonishing, the average being twenty-six barrels of fourteen stone to the Irish acre—the exact quantity grown by Mr. Derenzy on one acre. It was not sown till the 4th of May, 1830, and was reaped early in August the same year. It is remarkably hardy, and well adapted for this climate.

Flies upon Pictures.—The following simple way of preventing flies from sitting on pictures, or any other furniture, is well experienced, and if generally used, prevent trouble and damage; let a large bunch of leaks soak four or five days in a pail full of water, and wash the picture, or any other piece of furniture with it—the flies will never come near any thing so washed.

COMMUNICATIONS.

FOR THE GENESEE FARMER.

DURATION OF VEGETABLE LIFE.

From Nuttall's Introduction to Systematic and Physiological Botany. 1827.

Selected by D. T.

"The display of vegetable vitality, is in many instances, periodical. In those plants, which we indefinitely term *annuals*, the whole period of existence terminates in a few months, and from the seed alone, is then to be obtained a new generation of the species. But in our *perennial* plants, trees, and shrubs, which often die to the ground, or cast off their leaves at the approach of winter, though the motion of the sap is arrested by the influence of the cold, and the generation of the year perishes; yet besides the seed, nature has here provided an ample source of regeneration in the innumerable buds, formed and ingrafted in the alburnum or sap-wood of the root or stem; by this means, at an early season of the year, an invariable supply of vegetable beings are as plentifully produced as required by nature. The buds of each tree or plant containing within themselves individually, all the rudiments of so many distinct vegetables, may be transferred by ingraftment or growth in the earth, and thus form as many distinct individuals, each again subject *ad infinitum* to produce an additional ingrafted progeny of buds and branches. The numerous buds of each tree, nourished through the common medium of the trunk and branches, perish after developement and maturity, and are succeeded anew by another generation of ingrafting or protruding buds, for which they have provided by the deposition of the alburnum. The growth of every tree as well as herb, is then strictly annual, and the trunk is produced by a curious junction of dead and living matter. The rings of wood which may be counted in the transverse section of a tree not merely indicates its age, but the number of *distinct* generations of spontaneously ingrafted individuals, which it has sustained. In the animal kingdoms, among the order *Moluscæ* examples of this kind of aggregation are not uncommon, where many animals are inseparably connected and nourished through a common medium. *This agamous race of plants are always similar to the parent from whence they have originated*, as we all know by the process of budding and ingrafting; TO SAY THAT THESE BUDS OR GRAFTS PARTAKE OF THE AGE AND ACCIDENTS OF THE TRUNK ON WHICH THEY WERE EVOLVED, IS IMPROBABLE, IF NOT IMPOSSIBLE, AS THEY CAN, IN FACT, BE INFLUENCED ONLY BY THE STOCK TO WHICH THEY ARE LAST TRANSFERRED." Introduction p. 219—221.

FOR THE GENESEE FARMER.

I would inquire, through the medium of your paper, whether the word *petrifaction*, as it is used at the present time, has the same definition or is intended to convey the same idea which it formerly did, viz—The conversion of any substance to stone. It appears to me that many of our scientific writers have either given the word a new signification, or are much mistaken in the subjects examined, to which they apply it. We often see accounts from some tourists of their having examined many curious *petrifactions*, such as fish and frogs at Trenton Falls; petrified wood at Chittenango; trilobites, encrinites, and other animals and vegetables throughout Western New-York. In addition to these, we have hones said to have been brought from a lake in Scotland, which has the property of turning wood to stone, or of petrifying it. From the stratified appearance of these hones, and a conceived resemblance to the heart and sap of the walnut tree, it is affirmed that walnut is the only wood made use of for this purpose, and that by using such pieces as are part sap and part heart-wood, the different sides of the stone possess different qualities,—one being finer than the other.

As the localities where these petrifactions are found, are visited often by scientific men, I should like to be informed what are the peculiar properties of the waters that have this wonderful effect upon animal and vegetable substances, and what length of time is requisite for the completion of the change. As this word is to be met with in so many scientific works, I think the definition ought to be better understood, for the benefit of common roaders.

Professor Eaton, in describing birdseye marble, says, "the natural layers are pierced transversely with cylindric petrifactions, so as to give the birdseye appearance when polished." Perhaps Professor Eaton, or some of your correspondents will give me the proper definition of the word *petrifaction*. C. D.

FOR THE GENESEE FARMER.

MR. EDITOR—I wish to know which is the proper time for budding fruit trees, shrubs, &c. and the surest and most economical way of having it done.

By giving me some directions through your paper, you will much oblige a SUBSCRIBER.

In answer to the above inquiry, we would observe, that the proper time for budding any kind of fruit tree, is when the buds are perfectly formed upon the scion or kind you wish to cultivate, when the bark separates freely from the wood of the stock in which you wish to insert them,—to be done in the morning before breakfast, or at evening after you have returned from your work, (unless you have nurseries to inoculate) and when your knife is sharp;—and the proper person to perform that operation is—*yourself*.

SELECTIONS.

ESSAY ON MANURES,

Presented to the Cheshire, N. H. Agricultural Society, in 1823, by LUKE HOWE, ESQ., *for which a premium was awarded by said Society.*

Concluded from page 223.

In what *state* of *fermentation*, it is most profitable to put manure into the soil, or whether *any* be necessary in *farm yard dung*, has of late been much discussed by scientific writers on agriculture. Sir Humphrey Davy has treated the subject with much observation and science. He confirms his theory by experiments of his own, and of the most enlightened agriculturists. He thinks, the pure dung of cattle, &c. needs no fermentation previously to its application.

But as the dung of horses and cattle are united in the yard, with "straw, offal, chaff and various kinds of litter, a slight incipient fermentation, is undoubtedly of use." But he says, "it is better that there should be no fermentation at all, before the manure is used, than that it should be carried too far." "During the violent fermentation necessary for reducing farm yard manure to the state in which it is called *short muck*, not only a large quantity of fluid, but also a gaseous matter is lost, so much so that the dung is reduced two thirds in weight; and the principal elastic matter disengaged is carbonic acid with some ammonia; and both these, if retained by the moisture in the soil as has been stated, are capable of becoming an useful food to plants." By experiments he discovered that "soluble vegetable substances passed in an unchanged state into the roots of plants," and that fermentation was only necessary in the preparation of vegetable food to render fibrous substances soluble. The practice of our farmers is opposed to this theory. Their observations have been too limited in the use of green or unfermented dung. In making similar use of it as of the thoroughly fermented or *short muck*, the effects for the first year are in favor of the latter. For, if recent dung of cattle be put into the hill for Indian corn, its soluble and nutritious parts are too concentrated, and the mass too nearly impervious to nourish and extend the radical fibres of the plants. If this dung be mixed with straw, litter, &c. or horse dung, which is always imperfectly digested, the process of fermentation will generate too much heat for the tender fibres in some soils. But let the former or green dung be mixed with earthy matter and be put into the hill for Indian corn, and the latter or coarse manure be spread, and ploughed into the soil for the same crop, and also in the hill for potatoes, it will then be discovered that the produce will be equally good the first year and better prepared for future crops. In N. H. Ag. Repository it is stated that "when green dung is laid upon the field and ploughed in, it is so dispersed, that it can ferment but little, if any. It is said of unfermented dung, that its good effects will be felt longer than those of fermented. This is probably true, for during the first year after green dung is laid upon the field it does but little more than to be prepared for actual use." The superior effects of green dung in the subsequent years, being conceded: the question between us, rests upon its effects the first year. But green dung is "prepared for actual use" the first year. How is this effected? By what other process than fermentation?—It is well understood, that all that is necessary in this process is a due degree of heat, moisture, and oxygen, (or atmospheric air.) Neither of these is wanting when the manure is plowed into the soil. For wherever these obtain in sufficient quantity, to promote vegetation, decomposition will take place. The greater degree of heat in the manure heap, than in the manure in the soil, is generated by the process of fermentation, but this must begin without the agency of this *generated* heat, and when once commenced, the same cause will continue it, as well in the latter, however small the quantity, as in the former. The gradual manner in which this process will be carried on, will generate a slight degree of heat favorable to the germination of seeds, and will cause more of the elastic matter disengaged to be absorbed by the soil, affording a constant supply of food to plants.

But let us resort to facts, for the effects of green dung during the first year. Farmers universally prefer such for potatoes. Where-

ver there is an unusual large crop of corn, we are generally told that a quantity of *green manure* was plowed into the field before planting, and old manure was put into the hill. I observed, in a field of Indian corn last year, a part of which was manured in the hill with green dung, and the other with old, a greater burthen in the latter than in the former. This difference was undoubtedly owing to the causes before assigned. I have this year made a similar experiment. *One half* the quantity of green dung was used as of old. Every other circumstance was equal. The former was with the hoe coarsely pulverised, and mixed with earth. The corn, planted on the green dung, has appeared as well through the season as any other part of the field, the ears quite as well set and filled.

I have been informed by a farmer that he is in the practice of planting Indian corn on green dung, and that his crops are as good as his neighbours. He sleds his dung from his barn window late in the winter. The operation of the frost breaks up its texture, and by a little shovelling in the spring, it is pretty well prepared for the hill. Besides the loss in quantity and quality of manure in keeping it a year longer than is necessary, the economical farmer will calculate his loss of interest on the capital for that time. If the farm yard is cleared of manure twice in a year, equal quantities of other materials may be carted into it as when cleared in the fall only. The manure, which the industrious farmer has collected in his yards during the summer months, will, in the fall, be carted to his fields and mixed, by alternately carting a few loads from each source to the same heap. This manure will be in the best order to put into the hill for Indian corn. In the spring a large quantity of unfermented manure may be taken from the same sources to be spread on the same field, and for potatoes in the hill. In this economical plan, more ground may be kept under tillage, with greater returns of English grain and hay, succeeding Indian corn, without additional manure.

The importance of the subject, I trust, will in some measure apologise for having said so much on the degree of fermentation required in the preparation of manure.

Compost, made by plowing the sides of the roads, by decayed chips, &c. to which is sometimes added barn yard dung, lime or ashes, is most beneficially applied to top-dressing grass land. In this preparation, a material error is often observable. Green dung is spread on the surface of the bed or heap, and thus is lost the object of this application. Fermentation takes place slowly in the dung, but the heat and gases escape in the air, while the other materials remain, nearly unaffected by the process. The dung should be incorporated with the other materials by plowing, or laid up in alternate layers into heaps, the last layer being earth.—In this way the process of decomposition, commencing in the dung, communicates itself to the other matters, and the products disengaged, are absorbed or retained. Lime or ashes may be added, and perhaps, as economically without dung. They are powerful agents in promoting putrefaction. Compost of this kind cannot be profitably made, except for top-dressing land, which cannot be plowed, without an injury to the soil; for most of these materials would be more serviceable in the barn and hog yards as before stated. Top-dressing is undoubtedly a wasteful way of applying manure. If the land be descending it is washed off; if not, much of it escapes by evaporation.

Wood ashes have been used to fertilize the earth so long as we have any account of the art of husbandry. They contain charcoal and the vegetable alkali united to carbonic acid. These may again be reorganized into vegetable life. The alkali acts powerfully, in decomposing the woody fibres; and the gradual solution of charcoal increases their value as a permanent manure. They attract moisture from the atmosphere, which renders them particularly serviceable to dry soils. They are very beneficial to Indian corn, when applied to the hill, early in the season. But no grain receives so much benefit, from a dressing of ashes as wheat. In top dressing of grass land, they are also useful. Seven years since I applied a few cart loads of leached ashes to that part of a meadow, which bore little else than stinted hardhacks, cranberry and moss. The first year, clover and herds grass made their appearance. Since which time, it has produced a very good crop of these, red top, and meadow grasses. I have annually applied to different parts of the same meadow, either road manure, barn yard dung, or plaster. They have all been evidently useful; but the ashes the most so. Leached ashes are undoubtedly more beneficial than the unleached, according to their merchantable prices. Probably owing to their containing more charcoal, and possessing more body, their capacity for the absorption of moisture is greater. The opinion, that ashes exhaust the soil by their *forcing* properties, in the sense as generally received, is incorrect. It is true, they call into use some of its dormant qualities, which must in time be expended, and the soil less productive, unless some proportion of its products is restored, in the state of manure. But if they *force* the soil to do its office, they furnish from themselves, and the atmosphere, a considerable share of vegetable food. Instances could be mentioned of the perceptible good effects of ashes, on plowing eighteen or twenty years after their application. The paring and burning of loose vegetable mould, produce their favorable effects principally by the combustion of parts of its inert materials; and thus affording ashes and charcoal, which have a tendency to decompose the remainder.

Lime is a useful manure. When applied to soils, like ashes, it promotes the decomposition and putrefaction of vegetable matter. "By this kind of operation," says Sir H. Davy, "lime renders matter, which was before comparatively inert, nutritious; and as charcoal and oxygen abound in all vegetable matters, it becomes at the same time, converted into carbonate of lime."

Llme should not be applied with animal manures, unless they are too rich, and for the purpose of preventing noxious effluvia. It is injurious, when mixed with any common dung, and tends to render the extractive matter insoluble. It is evident from its operation that lime should be applied sparingly to light and naturally weak soils; but strong heavy loams containing much inert matter, will bear larger quantities, with more durable effects. It is a pretty well established fact, that worn out lands cannot be restored by the use of lime. It is obvious then, that it should not be repeated till the soil be furnished with vegetable matter requiring its soluble powers. This should seem to favor the opinion, that lime is incapable of being converted into vegetable food. But, by its action on vegetable matter in extracting its carbon and oxygen, it may in part form a soluble compound, capable of being absorbed by, and forming a constituent of plants. It is said in the Edinburgh Encyclopedia, that, "it is the farmer, only, who can judge of the quantity (of lime) to be given, but as a general principle, it is safer to exceed the proper quantity, than to be below it. In the latter case, the application may prove useless, and the whole expense lost; whereas, it rarely happens that injury is sustained from an excess, especially if more or less dung is soon added."

If a compost bed is to be made of materials difficult to dissolve or putrify, as tanner's spent bark, saw dust, shavings, &c. no other article could be so usefully added as quick lime.

Gypsum is much used, and is annually growing into higher estimation in this country. Its *modus operandi* on vegetation remains yet an unsettled question. By one writer, Kirwan, it is said that "the *rationale* of its effects may be deduced from its extraordinary septic powers; for it is found to accelerate putrefaction in a higher degree than any other substance, and that it is no inconsiderable part of the food of many plants. Sir H. Davy from experiments made by himself, has formed an opinion that it possesses no putrefactive powers, but that its effects result solely from its entering into the composition of plants, and "the reason why gypsum is not generally efficacious is probably because most cultivated soils contain it, in sufficient quantities for the use of grasses." This he thinks may be furnished the soil in the manure; and is not taken up in the crops of corn, peas, and beans, but is consumed by the growth of grass and hay.

I have in the course of this month tried several experiments, with the impression their results would correspond with those of the valuable author last mentioned; bnt I have been disappointed. I united 10 grains of each of the following articles,—plaster, ashes, slacked lime, and salt separately with as many pieces of mutton, of 200 grains each, and placed another piece of meat in the same situation. Decomposition was first discoverable in that with plaster, and ashes, and during the several days they were observed, they retained equal moisture and weight, whereas that with lime and the one to which nothing was added lost weight by the more rapid evaporation of their moisture. I have made similar experiments by mixing 1 drachm of beef intimately with one grain, also with half a grain of each of the above articles, lime excepted, and the results were similar to the above. These experiments were witnessed by gentlemen, who agreed with me in the results stated; and were they not contradictory to so good authority, I should deem them satisfactory. At present I do not consider them decisive, but should future experiments confirm these results, the operations of plaster might *first* be deduced, from the power of absorption of moisture, which it imparts to the soil; *secondly*, from its septic powers on animal and vegetable substances; *thirdly*, itself affording a valuable nutriment to plants.

It is perhaps, only from such a combina-

tion of causes, that we can infer its remarkable effects on vegetation. It is said it operates equally well on exhausted soils. Is this the fact, where there is no latent principle to be excited into action? This perhaps may admit of a doubt. But if correct, could it not be accounted for, by the radicles of the plants being supplied with more moisture, and their own absorbent powers increased by the operation of the plaster?

As experiments, of a frequent application of small quantities of plaster, are not attended with much expense, they will best direct the farmer in its use. It may be important, however, to observe that the nature of its supposed operation, requires that it should be placed near the surface of the soil; and that it should be applied before the spring rains are over; or no benefit will be received from it, the first year, as a solution of the plaster is necessary, and 500 times its weight of water are required to effect it. It is used in the quantities of 3 to 8 bushels an acre. Small quantities repeated are said to be better than the same amount applied at once.

Salt is an article which has not been much used as a manure in this state, and probably will not be. If it be a useful food to plants, it is too expensive to be extensively applied. Sir John Pringle has said that in small quantities it possesses sceptic powers. If so, the quantity must be extremely small, as in my experiments above mentioned, one half of a grain of salt was sufficent to retard decomposition in one hundred grains of meat. It is an absorbent of moisture and all vegetable manures are improved by being impregnated with it. The farmer may therefore take this into account, in the use of it, to preserve his hay, and benefit his cattle.

In the application of manure, the farmer will first determine the specific qualities, which his different fields require. If the soil of either be cold and heavy, he will carry to this his coarse and warm manure, such as horse dung, and that which contains the most straw, or unfermented matter: on the contrary if sandy or gravelly and dry, he will reserve for this his hog manure, and such as is most fermented; but if his land is uniformly moist and warm, he will mix the several kinds of manure before the application, as has been before directed. It is of no small consequence, that when manure is put into the hill or spread on the field, to be covered without delay, that the soil may retain its moisture and nutritious gasses.

HAY MAKING.

The first thing to be considered about hay-making, is the time of cutting the grass. It should not be cut too early, or before it has got its growth, for this will cause it to shrink too much in drying. On the contrary, it should not stand too late, or till the seed be quite ripe. It is not only harder to cut, but the ripeness of the seed will cause it to shatter out while drying, which will be a considerable loss, as the seed is the most rich and nourishing part; and the soil will be the more exhausted by nourishing the seed till it come to maturity, and the next succeeding crop will be poorer. There never can be any advantage in mowing late, unless in thickening the grass roots, by scattering some of the seed, where they were before too thin. He that mows early has the advantage of longer days for drying his hay; and of shorter nights, when the dews are less detrimental to hay-making.

But the farmer who has many acres of the same kind of grass cannot always expect to cut the whole of it in exactly the right season. That he may approach as near to right as possible, he should cut the thickest grass first of all; especially if it be in danger of lodging, or so thick that the lowest leaves perish, or the bottoms of the stalks turn yellow. The thinnest of his grass should be cut next, which is apt to be ripe soonest: and last of all the middling sized grass, or that which is on a medium between thick and thin.

Where a second crop is expected the same year, thick grass should be cut a little the earlier, that the roots may not be injured so much as to prevent their speedy recovery, by being closely covered too long by the first crop.

Some regard should be had to the weather, when the time of cutting is in contemplation. Those, especially, should regard it, who are able to call in as much assistance as they please in hay-making.

Grass, which has not been washed by rain for several days, has a kind of gum on it, which is known by its adhering to the scythe. This gum is thought to be a benefit to the hay; and the farmers are fond of mowing their grass when this gum appears, rather than just after the grass has been washed by rain.

As to the drying of hay, or the manner of making it, I know there are a variety of opinions. The right way is to do it in such a manner that as much of the sap as possible may be retained, and in the best state that is possible. In this I should think all would agree. All persons will allow that too much drying is hurtful. It is certainly a loss to rake it, or stir it all, when it is so dry that the leaves will crumble. And doubtless as much of the sap should be retained as is consistent with its being kept in good order for fodder, and for long keeping.

Some grasses will do well with less drying than is needful for others. The Rhode-Island bent, as it is called, or red-top grass, will do with less drying than some other grasses. It has been much practised to put up with so little dryness that it heats in the mow to so great a degree, as to make it turn brown like tobacco; and it is known that cattle will eat it well, and thrive on it. But the mow will certainly send out part of the virtue of the hay in steams. I cannot but think that all grasses should be so much dried, that the mows and stacks though they have a degree of heat, should not emit any sensible steam; and I would not wish to have hay made brown by mow-burning. It surely does not appear to so good advantage at market.

Were it not for the labor and cost, a good way of hay-making would be, for the hay-makers to follow at the heels of the mowers, at least, as soon as the dew is off, and spread the swarths evenly; turn the grass about the middle of the same day; make it up into cocks before night; open the hay and turn it the next day; and so on till it be sufficiently dried, doubling the cocks if signs of rain appear. It will not commonly take more than two or three days to dry it, unless it be very green, or uncommonly thick and rank. A person who has but little hay to make, need not be much blamed, if he do it in this way; especially if the weather do not appear to be settled.

The practice of the best English, Flemish, and French farmers, is to expose the hay as little as possible to the sun. It is carried in dry, but it preserves its green color; and you see hay two or three years old in their market, of so bright a green color, that we would scarcely conceive it to be cured.—Yet they are in the practice of preserving it for years, and value it more for its age. If such a course be best in climates so cool and cloudy how much more important would it be under our scorching summer suns?

But if the weather be unsettled, or if showers be frequent, it may be better to spread grass well, as soon as it is mowed, stir it often, cock it the same day it is mowed, open it in the next fair day when the dew is off, let it sweat a little in cock, and house it as soon as it is dry enough. It will bear to be laid greener on a scaffold, than in a ground mow; and in a narrow mow greener than in a broad one. And that which is at least of all made, should be put upon a scaffold.—*Deane.*

From the New-England Farmer.

WEANING LAMBS, &c.

The weaning of lambs should be effected about this time, or when the lambs are from six weeks to two months old. At this age they should be taken from the ewes, and have the best of pasture during the first fortnight; by the end of which time they will be so accustomed to living on grass that they may be turned into poorer pasture. It is important that the lambs when weaning should have a good bite of fresh grass, otherwise their growth will receive a check which no subsequent management can overcome.—Where they have grazed with their dams so long as five or six weeks little hindrance to their growth will be sustained by the separation. The ewes should be removed to such distant pastures or other places as that their bleating may not be heard by the lambs. There is however, one caution to be attended to in turning lambs into a rich pasture, which is to let them be in some degree satisfied with food previously, that they may not be surfeited or hoven or swollen. Should this disorder occur the distempered animals should be treated as directed, page 334 of our current volume. On weaning the lambs, it may be necessary to milk their dams several times, in order to relieve their udders, which otherwise sometimes become swollen and painful.

The worst wooled lambs, bad colored ones and those that are very small, should be made over to the butcher, and need not be weaned. It is recommended, however, not to kill or sell, for killing any lambs till they are about six months old, at which time their fleece becomes valuable.

"Those ewe lambs, which are intended for stock," according to Deane, "should not come at the rams. For if they have lambs at a year old, it stints them in their growth; and they have so little milk that their lambs commonly die for want of nourishment. Or if they chance to live, they will be apt to be always small. This practice is one reason why our breed of sheep in this country is so poor.

"The largest lambs should be sheared at the time of the new moon in July. Their fleeces will yield as much the next year, and the wool will be better; and as cold storms rarely happen at that time of the year, the

lambs will do better without their fleeces than with them.

Mr. Printer.—I am an old man and one of the first settlers of Washington county. I began my farm and live on it now; and as it is common for people to tell their experience, I will tell you some of mine in farming. I cleared my land, had my first crop of grain, and laid it down to mowing or pasturing as my neighbors did until a due proportion of my land was cleared. I then ploughed large fields when the stumps were mostly rotten and decayed, and planted and sowed it without manuring, except some small part, and that very sparingly. My crops were light and when I laid my fields down to mowing again, my grass was small, and I found that that mode of farming would soon spoil my farm. I then adopted a different course. I calculated that thirty or thirty-five loads of good manure would dress an acre of ground, so that it would produce a good crop of corn or potatoes, and the next year a good crop of wheat, with which it should be laid down to grass, and that it would not require to be ploughed up again from six to ten years. I have found this mode to answer the purpose; my crops have been good—I have hoed less than formerly and had more potatoes—I have sowed less and had more wheat—I have mowed less and had more hay. I have followed this course of farming for fifteen years. I plough grass ground every year. After my oats are taken from the ground, I plough it and cart on my fall manure, that I mean for planting ground, and my spring manure in the spring, spread it very even and plough it in. It is better to plough the ground the second time, and mix the manure well with it. In the fall after the corn and potatoes are taken off I plough the ground well, and fit it for wheat the next season at which time I lay it down to grass.—*Poughkeepsie Telegraph.*

KEEPING FARM ACCOUNTS.

Let any farmer make the experiment, and he will find it as interesting as it is useful, and both interesting and useful to know from year to year the actual produce of his farm. Let every thing, therefore, which can be measured and weighed, be measured and weighed: and let that, which cannot be brought to an exact standard, be estimated as if he himself were about to sell or purchase it. Let him, likewise, as near as possible, measure the ground which he plants, the quantity of seed which he uses, and the manure which he applies. The labor of doing this is nothing compared with the satisfaction of having done it, and the benefits which must arise from it. Conjecture in these cases, is perfectly wild and uncertain, varying often with different individuals almost a hundred per cent. Exactness enables a man to form conclusions, which may most essentially, and in innumerable ways avail to his advantage. It is that alone which can give any value to his experience; it is that which will make his experience the sure basis of improvement. It will put it in his power to give safe counsels to his friends, and it is the only ground on which he can securely place confidence to himself.—*New-England Farmer.*

Let every farmer divide his pasture ground as he pleases. Let the fence between his arable and pasture land be as strong as an external fence. But, if possible, let all his arable ground, though it be an hundred acres, be in one lot. Then his plough runs clear, in a long furrow. His tillage is divided only by the different species of grain and vegetables he cultivates. There are no fences of consequence, no inconvenient and worthless head lands; no apology for thistles and nettles. The scene is beautiful to the eye. The whole has the appearance of a garden, and begets to the farmer a sort of horticultural neatness.—*Gardners' Jour.*

York, (Penn.) July 12.

Silk.—That this article which is so much used in this country, could be produced in quantities much beyond the demand for home consumption, there can be no doubt upon the minds of any who have made experiments. A specimen of silk produced this season, under the management of Mrs. C. A. Morris, has been shown to us which is of an excellent quality. When it can be produced in so perfect a manner by the first essay, when the art is in its noviciate, we may safely presage the success which would attend its cultivation, after enjoying the beneficial lessons of experience.

We perceive that John Varnum, Esq. late member of Congress from North Essex District, in Massachusetts, is about making preparations for raising silk worms at his farm in Dracut, upon a very extensive scale. He calculates to have a million of mulberry trees in three years.

The article of silk is no doubt calculated to become a branch of extensive employment to a great part of the American people. One great desideratum in the cisatlantic community is, that employments should be more diversified, as the consequences of too many engaging in one branch are over production and prostration. Besides there are many spots of land, which are not calculated for the production of the present staple commodities of our country, which would produce the mulberry most luxuriantly. The county of York is interspersed with such spots, whose proprietors might impart to it a value equal to the best, by cultivating the mulberry and raising crops which would be exempt from the liability to failure from the seasons as crops of grain and grass have frequently been found.

The Garden of Fromont, six leagues from Paris, according to Silliman's Journal, contains 130 acres, and more than six thousand species and varieties of vegetables; many of them still new in France. Some of the green-houses are 2000 feet in length, with glazed roofs, possessing all varieties of exposure. Many of the noble forest trees of the United States have furnished contributions to the nursery of this garden.

As in agriculture, he that can produce the greatest crop is not the best farmer, but he that can effect it with the least expense, so in society, he is not the most valuable member, who can bring about the most good, but he that can accomplish it with the least admixture of concomitant ill.

Machine for washing Grain.—Mr. Gilbert Arnold, of Angelica, New York, has just patented a machine for washing and drying Grain. The description states that the grain is placed in a bason or hopper of water to the surface of which the smut and other impurities rise and float off. The kernel sinks, passes through a tub constructed to cleanse it thoroughly, and is carried into a heated sheet iron revolving cylinder, which, its position being inclined, discharges the grain dry and fit for grinding. It is said that wheat may be effectualy freed from garlic by this method.

Preserved Fruit.—Collect your Gooseberries about the middle of June and July, pick them as you would for present use, and put them quite dry into bottles, the neck large enough to receive them without bruising; then place them in a kettle of cold water, which boils, let them remain in the water, 10 or 15 minutes, then take them out, and after they have remained long enough to get perfectly cool, cork the bottles closely, then put them away in a cool place for use.—Currants may be preserved green in the same easy manner.

Fallen Fruit.—Be very careful to gather all punctured or decayed fruit, whether on your trees or on the ground, and give them to your hogs. If you do not, the worms which they contain, and which have been the cause of their premature decay will make their escape into the ground, and you will find the evils which await their visitations will increase upon you another season.

METEOROLOGICAL TABLE,

for the week ending July 16, 1831.

Days	Time	Ther	Barometer	Wind	Face of the Sky.	Observations
10	M	64	29,70	nw	fair	
	E	53	29,75	w	do	
11	M	70	29,86	s	do	
	E	58	29,80	n e	do	
12	M	72	29,80	w	do	
	E	60	29,65	n e	do	
13	M	76	29,60	w	do	
	E	64	29,50	nw	do	
14	M	86	29,45	w	do	
	E	63	29,45	w	rain	1-20
15	M	74	29,48	w	cly	
	E	58	29,48	w	cly	
16	M	64	29,47	w	rain	3-10
	E	60	29,47	w	do	2-10

☞ *The Barometrical and Thermometrical observations are registered at 10 o'clock A. M. and P. M., which by a long series of experiments made for the purpose, show that time to give a nearer mean average of the relative heat of a day than any other time*

ESSAYS ON AMERICAN SILK,

WITH Directions to farmers for raising Silk Worms—by J. D. Homergue and Peter S. Duponceau. Also,

The American Gardener,
Deane's New-England Farmer, and
Butler's Farmer's Manual, for sale by
HOYT, PORTER & CO.

Prince on the Vine, a few copies for sale as above. july 23

POTATOE ONIONS.

THIS Onion was first brought to Europe, by some soldiers in the British army, after they had compelled Bonaparte to leave Egypt. For some years after their introduction, so highly were they esteemed for flavor and product, that they sold for one shilling sterling per onion in London. For a full description of the onion and mode of cultivation, see Thorburn's Seed Catalogue, page 35—they should be planted in September and October. They frequently grow to 12 or 13 inches in circumference. A quantity of these onions, the growth of the present season (1831) may be had at WM. THORBURN'S *Seed Store*, 347 North Market street, one door north of Rockwell's Mansion House. Albany, July 16.

MISCELLANIES.

History of Hats.—At a recent meeting of the Society of Antiquaries, J. A. Reptone, communicated a very curious and interesting paper on the history of hats, accompanied by 8 sheets of drawings of hats and caps, in an infinity of shapes and fashions, from the time of Richard II. up to 1784. He observed, the name hat was derived from a Saxon word, meaning a covering for the head, in which general sense it had been used by early authors, and applied to the helmets of steel. Hats and caps were anciently made of felt, woollen silk, straw, and various other materials, and were as diversified in their colors. In the time of Elizabeth the common people generally wore wollen caps; and some acts were passed in her reign to encourage the manufacture of them. The broad brims were introduced by the cardinals to their scarlet caps, and followed by the clergy. The inconvenience of the broad brim all round caused the turning of one side up; then two sides were turned up; and at last, turning up three sides, introduced the cocked hat. The high crowned hat was first worn in the time of Elizabeth, and declined in the reign of Charles II. Mr. Reptone then noticed the ornaments of hats, such as feathers broaches and bands. Henry VIII. is described, on his entry into calais, as wearing feathers from India4 ft long; & men wore feathers in their hats as late as the reign of Queen Anne. Yew is mentioned as placed in the hat to denote mourning for a deceased relative or friend. The paper contained many amusing and curious quotations on the subject from a variety of authors

Pelican.—A very large bird of this species which has strayed probably from Lake Huron or Lake Superior where they are known to abound, was shot on Wednesday last at St. Marie, Nouvelle Beauce, thirty miles south of the town, by a inhabitant. Mr. Chasseur has purchaseed it and he is now stuffing it for his museum. It measures 8 feet 3 inches between the tips of the wings and 5 feet 9 inches from the toes to the bill. The bill is about a foot long and the large bag in which it carries fish or food distends to nine inches. No bird of this kind has, so far as we have heard, ever been seen in this Province, and it is particularly strange to have met with it in the middle of summer.—*Quebec Gazette.*

Remedy for Weak Nerves.—Take a morning walk, daily, at an easy sauntering pace, in a botanical garden, (if access can be had to it,) or in any garden rich in the beauties of Flora, so that the early part of your day may be breathed in the midst of herbs and plants will give forth with a sweet bounty, their soft, yet invigorating exhalations for your relief and benefit. Let your personal regimen be simple, and endeavor, likewise, that the tenor of your thoughts may be tranquil, gentle, and agreeable; for the mind itself has sometimes need of being put upon a regimen. This simple prescription is recommended by a French lady in a work just published. Exactly followed, it has been known to produce the happiest results; and if it were commonly resorted to by delicate female invalids, we should hear far less frequently of the chronic complaints of languor and lassitude, or of the acute disorders of head ache and tortured nerves.

Aerial Voyage of a Dog.—The subjects of the first experiments with the parachute, were naturally inferior animals.—On the 26th of August, M. Blanchard dropped a dog suspended from a parachute, altitude of 6000 feet above the surface of the earth. A whirlwind interrupted its descent, and carried it above the clouds. The æronaut soon after met the parachute again; the dog recognized his master, and expressed his uneasiness and solicitude by barking; another current of air, however, carried him off, and he was lost sight of. The parachute with the dog descended soon after the æronant, in safety.—*Dr. Lardner's Cyclo-*

Keeping fruit.—At a recent meeting of the Horticultural Society in London a paper was read, entitled, "An account of the different modes of keeping fruit which have been tried at the Society's garden for the season 1831." The statement was drawn up at the garden, and enumerated eight different modes; the three best and most practicable of which were, the covering of the fruit in pure and perfectly dry sand, dry fern, or in a deal box buried in the earth.—By any of these modes it was preserved, free from shrivelling and any disagreeable flavor; in all it must be deposited in a cold situation. By the other five modes, although the fruit was preserved in a pretty sound state, a musty flavor was found to be communicated; this was especially the case where oat-chaff was the medium.—*Herald.*

John Adams.—The following is extracted from the speech of John Adams, delivered in the Hall of Independence, before the Congress of 1776, on the adoption of the Declaration of Independence:

Addressing John Hancock, the then President, said—

"Read this declaration at the head of the army, every sword will be drawn from its scabbard and the solemn vow uttered to maintain it or perish on the bed of honor.—Publish it from the pulpit, religion will approve it, resolved to stand with it or fall with it. Send it to the public halls, proclaim it there, let them hear it who heard the first roar of the enemy's cannon, let them see it who saw their sons and brothers fall on the field of Bunker Hill and in the streets of Lexington and Concord, and the very walls will cry out in its support.

"Sir I know the uncertainty of human affairs, but I see, I see clearly through this day's business. You shall be made good; we may die; die colonists—die slaves—die, it may be, ignominiously and on the scaffold: Be it so—be it so; if it be the pleasure of Heaven that my country shall require the poor offering of my life, the victim shall be ready at the appointed hour for sacrifice, come when that hour may; but while I do live let me have a country, at least the hope of a country, and that a free country. But whatever may be our fate, be assured that this declaration will stand. It may cost treasure, and it may cost blood, but it will stand, and it will richly compensate for both. Through the thick gloom of the present, I see the brightness of the future as the sun in heaven. We shall make this a glorious, an immortal day: when we are in our graves our children will honor it: *they* will celebrate it with thanksgiving, with bonfires and illuminations. On its annual return they will shed tears—copious, gushing tears—not of agony and distress, but of consolation, of gratitude and joy.

"Sir, before God, I believe the hour has come; my judgement approves this measure, and my whole heart is in it. All that I have, all that I am, and all that I hope in this life, I am here ready to stake upon it; and I leave off as I began, that live or die, survive or perish, I am for the declaration. it is my living sentiment, and, by the blessing of God, it shall be my dying sentiment, independence now, and independence forever."

From the New-York Standard.

Our first visit to the *site* of Rochester was in 1814, at which time there was *one* house on the east side of the bridge, one on the west—and one Lawyer's office and no other domicil for man or beast, between that site and Lake Ontario, a distance of seven miles—now, on a few acres fourteen thousand souls are collected from the ends of the earth! but chiefly from the industrious hive of the universal Yankee nation. The immense and inexhaustible hydraulic advantages of the Genesee River—the almost miraculous fecundity of the adjacent counties, pouring their increasing treasures into this now unrivalled and still growing mart, to be distributed east and west by the Erie Canal, and north and east by lake Ontario—are the causes of the rapid and unpausing strides of Rochester to wealth—beauty—and duration. Monroe county alone is estimated to have yielded at the harvest of 1830 the enormous quantity of 1,004,020 bushels of wheat.

"The desert" of 1814 literally "buds and blossoms as the rose"—while other, and still other acres yet unvexed by the plow, remain to crown the labors of the husbandman for ages to come. This picture is touched with strong colors, but they are too faint for the subject; and to him whose curiosity led him in 1814 to view the falls of the Genesee and the expanse of Lake Ontario, as the chief objects of vision, and for that vision only—whose trembling gig danced from rock to rock, or was racked by the alternate abysses and mounds of a road to which the light of heaven scarcely reached through the dense foilage of the forest—or bounded with wearying and chafing torments over the "*corduroy*" log ways—we say, to such an individual, the presence of massy and lofty edifices in the very torrent of the stream—of spires—and domes—and turrets—in all the variety and beauty of fanciful architecture—of private dwellings, comparing within and without, with any in the oldest cities of the state—in short, for such an individual to feel and see a *Venice* of the Lakes—a city in yesterday's desert—may be ranked amongst the most astonishing sights that can arrest the attention, and fill him with sensations alike indescribable and rare.